

# Product Selection Guide

**CONCURRENT  
TECHNOLOGIES**



IoT Solutions  
Alliance





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# About Us

Concurrent Technologies has, since its establishment in 1985, developed a wide range of computer products based on Intel® processor technology, for use in critical embedded applications.

The Company's excellent reputation testifies to the very best levels of co-operation and product quality enjoyed by our customers worldwide.



Scan QR code to follow us on **LinkedIn**  
or search for: **Concurrent Technologies Plc**

## ✓ Markets

Concurrent Technologies is a world leader in the design and development of high performance computer products. Projects such as telecommunications systems, radar networks, aerospace applications, defense, medical and industrial systems incorporate Concurrent Technologies' boards.

## ✓ Products

We design and manufacture a wide range of AMC®, CompactPCI®, VPX™ and VME boards, with a focus on processors using the latest devices from Intel®. The functionality of many of the boards can be further increased by the addition of PMC and XMC modules - either from Concurrent Technologies or from the extensive choice available from third party suppliers. In addition to the wide range of processor boards, Concurrent Technologies can offer switched fabric boards for CompactPCI, VPX and VME systems, as well as PMC Carriers, XMC Carriers and Mass Storage boards.

## ✓ Wider Temperature Ranges

In addition to the commercial temperature range of boards, many of our latest products are available in extended temperature ranges -25°C to +70°C and -40°C to +85°C, so the same board designs can be used in various environments and applications. For harsher environments (shock, vibration and conduction-cooled) there is a specific range of ruggedized products operating from -40°C to +85°C.

Modules that are available as a ruggedized variant will display the icon below, in the corresponding category color:

VME and VPX



CompactPCI



XMC



## ✓ Quality

Concurrent Technologies has ISO 9001:2015 approval and designs and manufactures to the highest standards. All products are checked carefully for compliance to the appropriate standards at every stage of development, from the initial design, and in-house printed circuit board layout, to assembly test and final inspection. Only high quality components are purchased and assembled according to the workmanship standards expected by our customers. All quality systems and procedures are reviewed and monitored regularly to ensure adequate control and traceability throughout.

## ✓ Design Philosophy

Concurrent Technologies' team of highly experienced design engineers develops hardware, firmware and software products of the highest quality. Regular design and approval reviews ensure that the products meet the required specifications and standards, and are manufacturable to a high quality level. Key components are chosen specifically from embedded roadmaps to ensure longevity of supply. In addition to our standard product ranges, many customized products have been developed to meet specific needs of our customers. Further details of our custom design service are available on request.

## ✓ Operating System Support

To ensure that the products are easy to integrate, Concurrent Technologies supports many of today's leading operating systems - including Windows®, Linux® and VxWorks®.

## ✓ Further Information

Our websites contain more information on the company, the products and latest product releases.

[www.gocct.com](http://www.gocct.com)

Or email: [sales@gocct.com](mailto:sales@gocct.com)

# VPX

Based on key customer feedback, the original VPX specification evolved to include OpenVPX™ profiles for multi-vendor integrated environments. The OpenVPX framework defines the clear interoperability points necessary for integration between Module to Module and Module to Backplane and Chassis. The OpenVPX specification and profile list was updated again in 2019 following input from the SOSA Open group, and Concurrent Technologies is at the forefront in implementing compute intensive boards that are compliant to these new profiles.

VPX products are widely deployed in military and aerospace environments and Concurrent Technologies supplies a range of processor boards, switches, storage, XMC carriers as well as development systems. Rugged variants are usually available based on a rigorous testing cycle to ensure reliability despite severe operating temperatures, shock, vibration, altitude and other environmental factors.



**TR AEx/3sd-RCx**

**RC**

## **Rugged 3U VPX Accelerator Engine**

TR AEx/3sd-RCx is a high performance 3U VPX accelerator engine based on an Intel® Arria® FPGA. The Board is focussed around Inference at the Edge applications, such as real-time object recognition and behaviour monitoring.



**TR J4x/6sd-RCx**

**RC**

## **Rugged compute intensive 3U VPX Server Board**

TR J4x/6sd-RCx is a rugged 3U VPX board for compute intensive applications, fitted with a 12-core Intel® Xeon® D-1559 processor and 64GB of soldered down DDR4 memory for server grade application and a 40G Optical Interface.



**TR H4x/3sd-RCx**

**RC**

## **Rugged compute intensive 3U VPX Server board**

TR H4x/3sd-RCx is a compute intensive rugged server board. It has been developed to align with a proposed VITA 65.1 profile that is based on feedback from the SOSA™ Consortium. It features a processor with up to 12-cores, large memory capacity, local storage and support for virtualization.



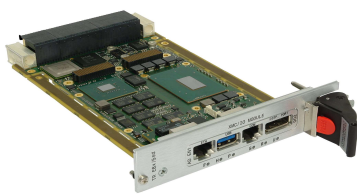
**TR G4x/msd**

**RC**

## **3U VPX board based on Intel® Xeon® processor D-1500**

TR G4x/msd is a 3U VPX board which features up to 64 Gbytes of soldered down DDR4 memory with Error Correcting Code (ECC) for superior reliability. Includes Direct Attached Storage options for improved rugged server performance.





### TR E8x/msd

RC

#### Rugged I/O intensive 3U VPX processor board

TR E8x/msd has been specially designed to ensure enhanced security, flexibility and smooth operation for I/O intensive tasks. By default it is fitted with a 6-core Intel® Xeon® E-2276ME processor running at 2.8GHz with up to 32GB of soldered down DDR4 memory



### TR C4x/msd

RC

#### 3U VPX board based on Intel® Xeon® processor D-1500

Server grade processing and storage capability with up to 16-core processors, up to 32 Gbytes of DDR4 DRAM, on-board solid state drive options, 2x10GBASE-KR Data Plane and up to x16 PCI Express® Gen 3 Expansion Plane.



### TR E5x/msd

RC

#### 3U VPX board based on Intel® Xeon® processor E3-1500 v5

High performance computer board with on-board graphics based on 4-core Intel® Xeon® processor and up to 16 Gbytes of DDR4 DRAM. On-board solid state drive options, XMC site for local I/O and PCI Express® Gen 3 Data and Expansion Plane.



### BA 1TR/501

RC

#### 3U VPX processor board with 10 Gigabit Ethernet

BA 1TR/501 is a 3U VPX™ board with an Intel® Xeon® processor E3-1505M v5 for applications that require high speed networking connectivity within a single VPX slot.



### TR D2x/msd

RC

#### Processor Board based on Intel® Atom™ processor E3800

TR D2x/msd is a 3U VPX board and is available with two processor options: a single-core for low power consumption and quad-core for enhanced performance. This module scores highly in Size, Weight and Power (SWaP) metrics and is suitable for deployment in critical embedded markets.



### BA 9TR/301

RC

#### 3U VPX Rugged GPGPU processor

The GPGPU element of BA 9TR/301-RCx is an NVIDIA® GeForce® GTX 1050 Ti device which is coupled via a x8 PCI Express® link to a quad-core Intel® Xeon® processor E3-1505L v5 with 16 Gbytes DDR4 memory and a 64 Gbytes Flash disk.



### FR 351/x06

RC

#### 3U VPX Ethernet Switch

FR 351/x06 is a 10 Gigabit Ethernet switch designed to provide high bandwidth communication between VPX modules for server applications. Two 10 Gigabit ports SFP+ ports are provided on the front panel.



### FR 341/x06

RC

#### 3U VPX Fabric Switch Board, with PCI Express® and Gigabit Ethernet

FR 341/x06 is a switch for use in modern 3U VPX systems with easily configured logical connections between six payload boards at x4 PCI Express Gen 3 speeds. This module is a good choice for solutions based on a range of 3U VPX payload boards from Concurrent Technologies and our partners.



### FR 331/x06

RC

#### 3U VPX Fabric Switch Board with PCI Express®

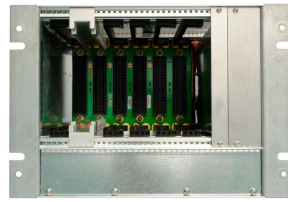
FR 331/x06 is a 3U OpenVPX™ fabric switch board with x4 PCI Express data plane and a 1000 BASE-BX control plane per payload board. For harsher environments extended operating temperature variants are available.



### SY TR2/525

#### 5-Slot VPX Server System

SY TR2/525 is a ready-to-use solution based on TR G4x/msd or TR C4x/msd which communicates with up to four PCI Express based payload boards without the use of a switch module.



### SY TR3/526

#### 6-Slot Power and Ground VPX System

SY TR3/526 allows the creation of a customer specific backplane by using Meritec cables. SY TR3/526 has 6-slots, is supplied with rails for air-cooled cards and can support optional rails that allow conduction-cooled boards to be installed.



### SY TR1/523

#### 3-Slot 3U VPX System based on Intel® processor

SY TR1/523 is a ready-to-use solution for customers starting VPX projects based on Intel® processors. Conveniently packaged and suitable for desk and lab use, this system is supplied with an Intel® processor board and has two free slots for use with additional VPX boards.



### SY TR1/526

#### 6-Slot Gen 3 System with Expansion Plane

SY TR1/526 is designed as a solution for 3U VPX development projects based on Intel® processors. This system is suitable for desk and lab use and includes a backplane that supports a single switch card and up to five VPX boards



### SY TR1/527

#### 7-Slot Gen 3 System based on Intel® processor

SY TR1/527 is a 7 slot 3U VPX development system based on Intel® processors suitable for desk and lab use. This system has a backplane that supports a single switch card and up to six VPX payloads.



### TR MS6/522

#### 3U VPX Storage Card

TR MS6/522 is a 3U VPX air cooled board with two fixed SATA600 SSDs for up to 16TBytes storage capacity.



### TR MS6/523-RCS

RC

#### 3U VPX Storage Card

TR MS6/523-RCS is a rugged, conduction cooled 3U VPX board with a single front removable SATA600 SSD providing up to 2TBytes storage capacity.



### BA 2TR/501

#### 3U VPX Multi-channel Serial Board

BA 2TR/501 is a 3U VPX board supporting up to eight serial communication ports via front and rear connections.



### BA 2TR/502

#### 3U VPX quad port Gigabit Ethernet board

BA 2TR/502 is a 3U VPX board with a quad-port Gigabit Ethernet controller for applications that require additional networking connectivity within a single VPX slot.





### TR XMC/m11

RC

#### 3U VPX XMC Carrier

TR XMC/m11 is a 3U VPX carrier for an XMC expansion module supporting PCI Express Gen 3 for high performance. TR XMC/m11 has switches to allow the user to configure the PCI Express link from either the data or expansion plane on the backplane.

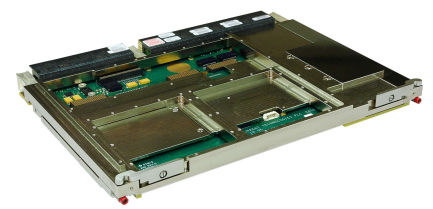


### TR XMC/x01

RC

#### 3U VPX XMC/PMC Carrier

The TR XMC/x01 XMC/PMC carrier board provides a flexible solution for adding modular I/O functionality to a 3U VPX system.



### VR E7x/msd

RC

#### 6U VPX Processor Board

VR E7x/msd is a 6U VPX processor board based on a 6-core Intel® Xeon® processor E-2176M and includes a wide variety of built-in I/O. It is available with up to two XMC sites plus SATA and PCI Express based storage capabilities.

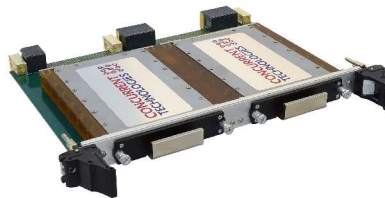


### VR E1x/msd

RC

#### PMC/XMC Carrier based on 4<sup>th</sup> Gen Intel® Core™ Processor

VR E1x/msd is a 6U VPX™ processor board with a wide variety of built-in I/O making it suitable for use in defense, industrial, scientific and aerospace markets. This module is an ideal choice as the central management and control station for a 6U VPX solution.



### VR MS6/524

#### 6U VPX Storage Card

VR MS6/524 is a 6U VPX air-cooled board with two front removable SATA600 SSDs providing up to 16TBytes storage capacity.



### VR XMC/x01

RC

#### 6U VPX Dual XMC/PMC Carrier and Mass Storage Board

VR XMC/x01 provides a flexible solution for adding modular I/O functionality and storage to a 6U VPX system. For harsher environments, ruggedized variants are available.





# VME

VME continues to be a well supported and widely installed bus architecture particularly in the defense market. we offer a choice of Intel® processor-based VME boards designed for long life-cycle applications.

These high performance processor boards are complemented by a choice of switch fabric boards, XMC and PMC carriers, and mass storage modules.



**VP B7x/msd**

**RC**

## **VME board based on Intel® Xeon® processor**

VP B7x/msd is designed to provide high levels of performance and additional security capabilities for VME applications. It is based on a 6-core processor, has two PMC/XMC sites for local expansion and supports a number of local storage options.



**VP F6x/msd**

**RC**

## **VME board based on Intel® Xeon® processor E3-1505L v6**

VP F6x/msd is designed as a long life VME board for I/O centric applications using a processor chip that will be available until 2031. As well as the two on-board XMC/PMC sites it has an expansion connector for a carrier with two additional PMC sites.



**VP B1x/msd**

**RC**

## **VME Board based on 4<sup>th</sup> Gen Intel® Core™ i7/i5 Processor**

VP B1x/msd is a high performance, flexible VMEbus board designed for long life-cycle applications in the defense, industrial, scientific and aerospace markets. This board allows for easy transition for many existing VMEbus applications.



**VP F1x/msd**

**RC**

## **VME board based on 4<sup>th</sup> Gen Intel® Core™ processors**

VP F1x/msd is a 6U processor board based on 4<sup>th</sup> generation Intel® Core™ i7/i5 processors, which allows for an extended choice of long-life VMEbus products that have been designed to be available beyond 2020. Has two XMC/PMC sites and a PMC expansion connector.

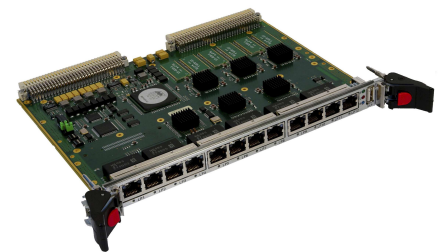


**VP E2x/msd**

**RC**

## **VME board based on Intel® Atom™ Processor**

VP E2x/msd is a low power consumption VME board with a wide choice of I/O interfaces and has been designed for long life-cycle applications. The board offers sufficient processing and graphics performance for many existing VME applications. Optional Fast Boot software is available.



**FP 210/024**

## **10/100/1000 Unmanaged Ethernet Switch Board**

FP 210/024 is an entry-level 24-port Ethernet Switch Board for use in a standard VME backplane. This board is an excellent choice for a range of applications including networking equipment, voice over IP technology systems and blade-based servers.





### AD CR6/XMC

#### Dual XMC/PMC Carrier Board

AD CR6/XMC provides a flexible solution for designers wishing to add functionality to 6U VME systems. For harsher environments, extended temperature versions are available.



### AD CR5/PMC

#### Dual PMC Carrier Board

AD CR5/PMC can be used with a range of Concurrent Technologies VME host processor boards. This board increases the flexibility and functionality of the host board by allowing two PMC modules to be utilized. Extended temperature versions are supported.



### AD CR3/PMC

#### Dual PMC Carrier Board

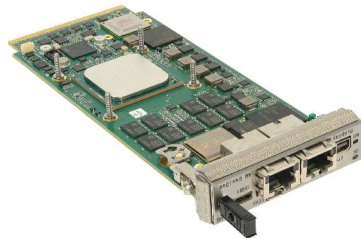
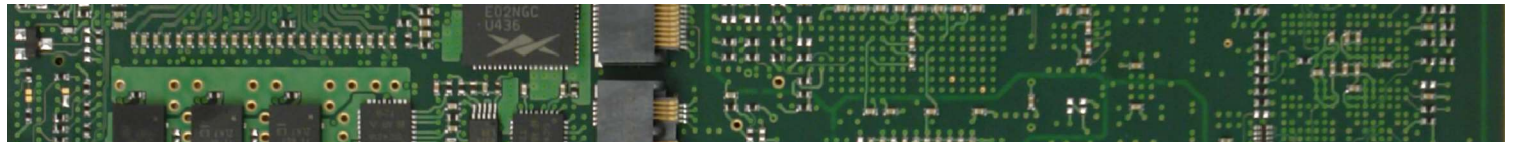
AD CR3/PMC can be used with a range of Concurrent Technologies host processor boards. The carrier board allows for 2 PMC modules to be added to the host processor board which increases the flexibility and I/O capabilities.





AdvancedMC® (AMC) modules were originally defined as an open standard way to add hot swappable mezzanine modules to AdvancedTCA® blades, mainly for telecom related applications. Over time they have become more widely used to create MicroTCA® systems by plugging them directly into a backplane.

The most common AMC format is the single module type which provides sufficient board space to create high performance, modular solutions. Double format modules are better suited for higher power and I/O intensive applications and, driven by an extension of the MicroTCA specification (MTCA.4), are now widely used for high-speed physics experimentation and control. Concurrent Technologies supports AMC modules with Ethernet, PCI Express and RapidIO® interconnects and can offer Fabric Interconnect Networking Software (FIN-S) to simplify the use of multiple modules in a system with low latency, high throughput connections.



## AM E4x/msd

### AdvancedMC® based on Intel® Xeon® processor D-1500

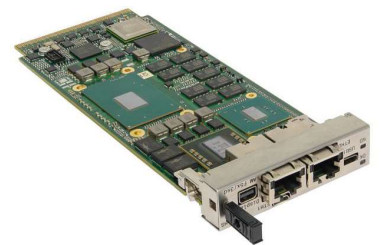
AM E4x/msd is a single, compute intensive AdvancedMC® for high performance applications. The module is fitted with 32GB DDR4 DRAM Error Correcting Code Memory and suitable for application within the industrial, test and wireless markets.



## AM G6x/msd

### AdvancedMC based on Intel® Xeon® processor E3-1500 v6

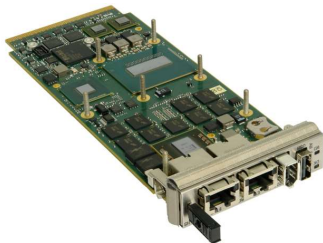
AM G6x/msd is a double AdvancedMC for high performance applications with Direct Attached Storage options. This module is very well suited to demands within high-speed physics experimentation, instrumentation and test based applications.



## AM F5x/msd

### AdvancedMC based on Skylake microarchitecture

AM F5x/msd is a full or mid-size AdvancedMC processor module based on an Intel® Xeon® E3-1500 v5 processor with dual 10 Gigabit Ethernet and PCI Express interfaces.



## AM C1x/msd

### AdvancedMC based on 4<sup>th</sup> Gen Intel® Core™ processor

AM C1x/msd is a high performance, full-size or mid-size AdvancedMC processor module with RapidIO backplane connectivity and dual 10 Gigabit Ethernet for high speed networking applications.



## AM 600/x0x

### SATA Mass Storage Single-Width AdvancedMC Module

AM 600/x0x supports either a SATA hard disk drive or two CompactFlash® drives, which allows this module to be ideally suited to applications such as mass storage data servers, database management and local system storage.

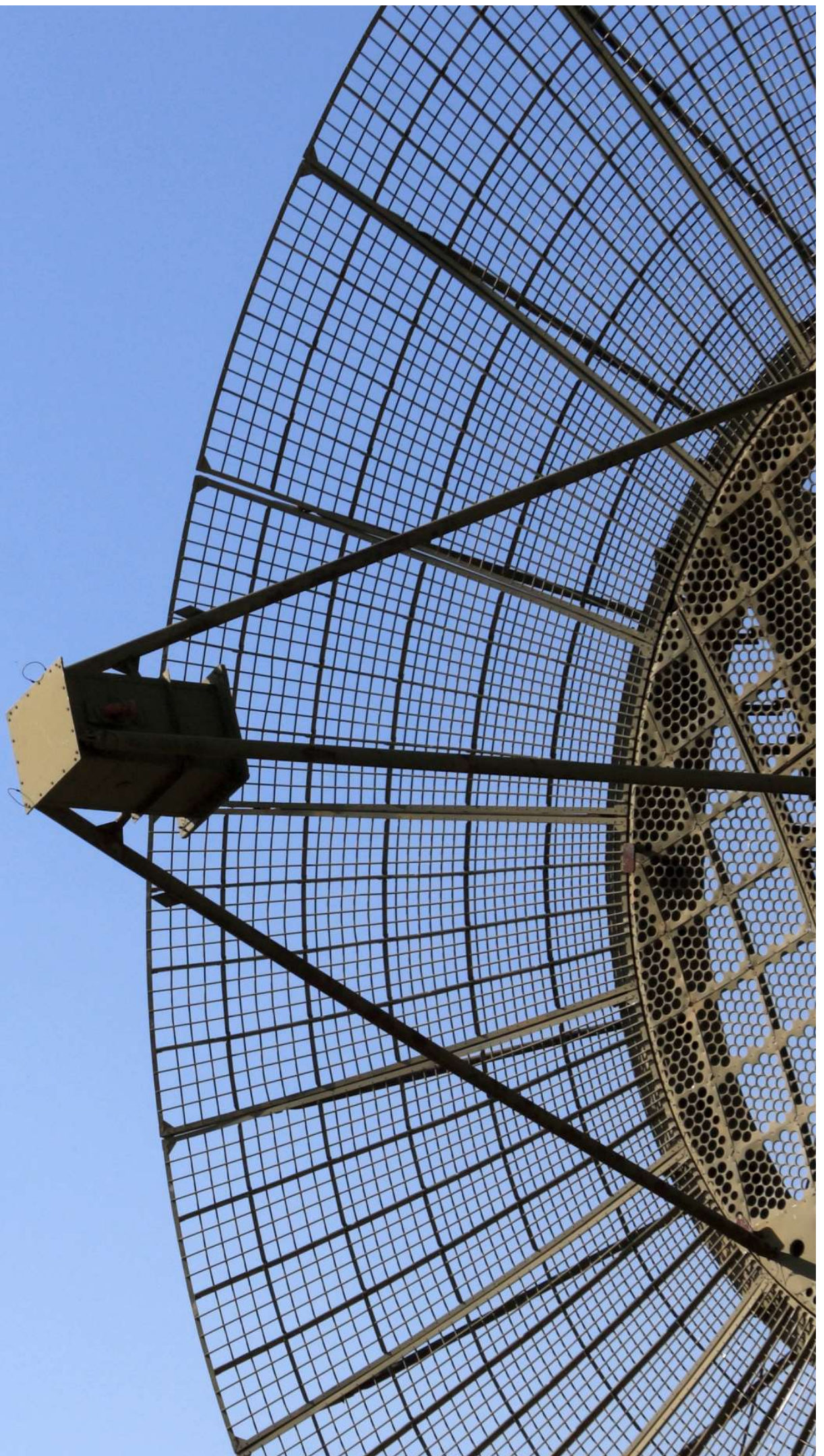


## SY AM1/526

### 6-Slot MicroTCA System with Intel® based processor

This modular MicroTCA Cube development system, based on open standards, is available for lab and desktop use.







# CompactPCI®

Our range of **6U CompactPCI®** products provides the user with a choice of high performance, highly integrated slot controllers and peripheral controllers. These boards use Intel® processor platforms for ease of programming and widespread availability over long life-cycles.

**3U CompactPCI® (CPCI)** continues to be a popular architecture, particularly for transportation and defense applications. We offer a range of commercial and ruggedized processor boards based on high performance Intel® Core™ processors, or the lower power Intel® Atom™ processors. Complementary products include mass storage and XMC/PMC carriers.

Many of the products are available in commercial and extended temperature variants. This popular family of single board computers is complemented by our range of switch fabric boards and XMC/PMC carriers.



## PP B8x/msd

### 6U CPCI board based on Intel® Core™ i3 Processor

PP B8x/msd is a single slot air-cooled CompactPCI board, allowing customers to easily migrate to the latest generation of Intel® processors for improved performance and longer system lifecycles.



## PP B7x/msd

### 6U CPCI board based on Intel® Xeon® processor E-2176M

PP B7x/msd is a single slot air-cooled CompactPCI board, allowing customers to easily migrate to the latest generation of Intel® processors for improved performance and longer system lifecycles.



## PP B1x/msd

### 6U CPCI board based on 4<sup>th</sup> Gen Intel® Core™ processor

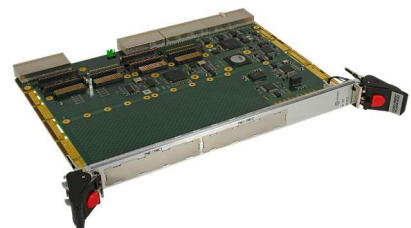
PP B1x/msd is a 6U CompactPCI board based on 4<sup>th</sup> generation Intel® processors for high performance applications with enhanced graphics capabilities. A number of build variants are available including dual 10 Gigabit Ethernet for high speed networking.



## FP 110/019

### 10/100/1000 Ethernet Switched Fabric Board

FP 110/019 is an entry-level 24-port Ethernet Switched Fabric Board for use in CompactPCI PICMG® 2.16 and VITA 31.1 Packet Switched Backplane environments. This board is an excellent choice for cost sensitive applications.



## PP XMC/m02

### Dual XMC/PMC Carrier Board

PP XMC/m02 provides a flexible solution for designers wishing to add functionality to 6U CompactPCI systems by using XMC or PMC modules. For harsher environments an extended temperature version is supported.



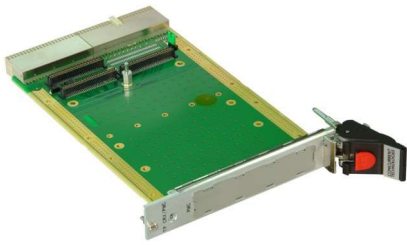
## TP B1x/msd

### 3U CPCI board based on 4<sup>th</sup> Gen Intel® Core™ processor

TP B1x/msd is a 3U CompactPCI board that is designed to be suitable for a range of defense, aerospace, industrial control, scientific and communications applications.

**RC**





**TP CR1/PMC**

**RC**

### **3U CPCI PMC carrier board**

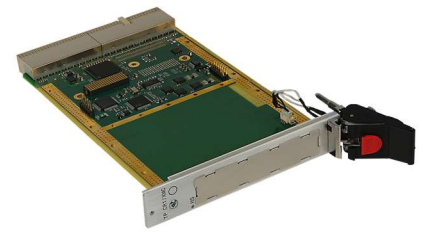
TP CR1/PMC is a 3U CompactPCI PMC bridgless carrier board, providing a flexible solution for designers wishing to add PMC I/O functionality to a CompactPCI system.



**TP MS1/xxx**

### **3U CPCI mass storage module**

TP MS1/xxx is a 3U CompactPCI Mass Storage Module that supports up to four 2.5-inch SATA300 drives. The controller board is designed to work with a range of CPCI systems and can support various hardware RAID functions for two additional SATA300 drives.



**TP CR1/XMC**

**RC**

### **3U CPCI XMC carrier board**

TP CR1/XMC is a 3U XMC carrier board that provides flexible solutions for designers wishing to add XMC I/O functionality to a CompactPCI system. XMC modules such as SAS, LAN, WAN, Graphics & Communications Controllers are supported.





XMC modules are an ideal way to add functionality to modular, open standards based systems. These mezzanine modules are about the size of an iPhone® and are plugged into compatible slots on a host processor or carrier board to create the perfect mix of functionality for specific applications.

XMC builds upon the success of the PMC standard by ensuring a common form factor but with higher bandwidth communications using PCI Express® interconnects.

Concurrent Technologies offers a wide range of XMC modules that are suitable for commercial and rugged deployments.



**XP B5x/msd**

**RC**

## Processor XMC based on 6<sup>th</sup> Gen Intel® Core™ processor

XP B5x/msd is a processor XMC based on a dual-core 6<sup>th</sup> generation Intel® Core™ processor with up to 16 Gbytes of memory for low SWaP characteristics. With a built in solid state drive, XP B5x/msd makes it easy to control and manage custom or off the shelf signal processing solutions.



**XM RS2/20x**

**RC**

## Multi-Channel XMC Module

XM RS2/20x is ideal for applications that require multiple serial expansion ports to communicate with legacy devices that are still widely used in defense, industrial control and communications applications.



**XM SA1/001**

## Quad SAS/SATA Port XMC Adapter

XM SA1/001 is an XMC module with the capability to connect to 4 external SAS or SATA drives via a convenient front panel connector, along with the capability to support up to 6 Gbps drives and lower speed drives for in-field flexibility.



**XM 620/x01**

**RC**

## M.2 Device XMC Module

XM 620/x01 has two M.2 sites, each of which supports Type 2242, 2260 and 2280 M.2 storage devices. Each M.2 device has a x4 PCI Express® (M-key) connection to the host card to optimize performance dependent on the devices fitted.

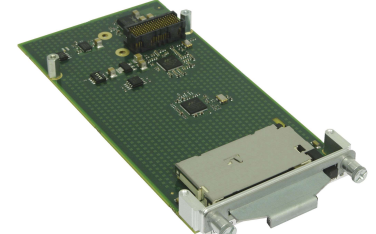


**XM 610/001**

**RC**

## Dual CFast™ Carrier XMC Adapter

XM 610/001 is an XMC adapter designed to carry up to two CFast™ cards. For harsher environments extended temperature and ruggedized versions are supported.



**XM 600/001**

## CompactFlash® Carrier XMC Adapter

XM 600/001 is an XMC adapter designed to carry a single CompactFlash® card. For harsher environments extended temperature versions are available.



**XM 530/x22**

**RC**

**Dual-port 10 Gigabit Ethernet XMC Adapter**

XM 530/x22 is a dual 10GBASE-T 10 Gigabit Ethernet XMC adapter supporting rear I/O connectivity and is available to suit both rugged and non-rugged applications.



**XM 520/032**

**Dual-port 10 Gigabit Ethernet XMC Adaptor**

XM 520/032 is a high performance, dual port 10 Gigabit Ethernet adaptor with two SFP+ cages on the front panel. This module is designed for applications that require very high-speed data throughput and lower-latency communications.



**XM 515/x24**

**RC**

**Quad-port Gigabit Ethernet XMC Module**

XM 515/x24 is an XMC module for applications that need multiple Gigabit connectivity. Suitable for use on any board with an XMC expansion slot and is available with either front or rear I/O.





# Software

To speed up your application development, our products support many leading operating systems used in essential embedded applications. Board support packages are typically available for Linux®, Windows® and VxWorks®. Other operating systems are supported based on customer demand.

A number of additional software packages are available to enhance security, speed up boot times, aid diagnostics or configuration and to simplify connectivity for high performance computer solutions. By leveraging our expertise in providing application enabling middleware around our products, we help you create better products and minimize your development time.



## TA GRD/nnn

### Board Level Security

Concurrent Technologies' Guardian Security package is designed to significantly improve processor board security to make them suitable for deployment in sensitive applications.

It ties together specific hardware features with a range of software functionality to deter tampering and to lock access to intellectual property. It is offered as a standard package but can be tailored to a bespoke solution for individual customer requirements.

It includes counter measures to prevent against:

- ✓ Physical intrusion
- ✓ Accessing classified data
- ✓ Executing non-trusted software
- ✓ Reverse engineering



## SW U01/nnn

### Sanitization Utilities

This utility performs sanitization of non-volatile embedded memory devices, the Trusted Platform Module (TPM) and SATA storage devices connected to a Concurrent Technologies' computing board.

The tool also includes functions for saving, restoring and verifying the configuration of those non-volatile embedded memory devices.

Each version of the tool supports a single board type.

## SW VSC/001

### VPX Tool

Concurrent Technologies' VPXTool enables a user to check and reprogram the configuration of the PCI Express® switch device(s) on our VPX processor boards. It does this by reprogramming the PCI Express switch EEPROM devices and is available as a UEFI shell utility and a Linux RPM.

Typical operations include setting up Non-Transparent ports, setting lane widths and speeds for data and expansion plane links and configuring payload sizes. Special options for clocking and throttling are provided.

## SW FSC/001

### Fabric Switch Configuration Tool

SW FSC/001 Switch Configuration Tool is a software package which allows the user to configure and control several of the features of Concurrent Technologies Ethernet switch fabric board and PCI Express® switch fabric board products for VME, VPX™ and CompactPCI® architectures.

This package will run on Microsoft® Windows® or Linux® operating systems. With a range of configuration and control commands available including; switch set up, configuration, hardware status, VLAN set up and QoS configuration are all displayed.

- ✓ Used to configure legacy fabric switch boards
- ✓ Requires a Windows or Linux host
- ✓ Connects via a serial port or IPMB connection
- ✓ Provides status and configuration capabilities



## SW FST/nnn

### Fast Boot Software

Our boards are used in a wide range of embedded applications in the industrial, transportation, military and communications markets.

By default, our Intel processor boards are supplied with a BIOS that initializes all the specific hardware before passing control to a boot loader for operating system and application installation.

By definition, the BIOS based solution is totally generic and offers widespread compatibility but is not optimized for the fastest boot times. For those applications that need more speedy start up times, Fast Boot can be the solution.

- ✓ Dramatically reduces boot times
- ✓ Provides a boot loader image to replace BIOS
- ✓ Includes example Linux kernel booting from onboard storage

## CD LNX/BSn

### Linux Board Support Package

Our Linux Board Support Package contains:

- ✓ A VME driver for our VME boards
- ✓ A PCI Express driver for our VPX boards
- ✓ A backplane driver for our CompactPCI boards
- ✓ Drivers to access the memory and flash devices on supported boards
- ✓ Real time extension support for select boards
- ✓ Utilities, drivers, script files and Xorg configuration files needed by various boards

## CD WIN/BSn

### Windows Board Support Package

Our Windows Board Support Package will automatically install the necessary device drivers for the board in use.

This package also includes:

- ✓ A VME driver for our VME boards
- ✓ An I/O driver and API to provide access to register level features
- ✓ A Board Status Information program and API for displaying temperature/voltage sensor data and results from the optional Power-on BIT (PBIT) package tests

## CD VXS/nnn

### VxWorks 7 Board Support Package

Our VxWorks 7 Board Support Package (BSP) is compatible with Wind River's VxWorks 7 Core Platform and Wind River Workbench 4. This package includes:

- ✓ An enhanced VME API for our VME boards
- ✓ An Application Flash and NVRAM API
- ✓ An API for the optional Built In Test package
- ✓ An ATA Security API
- ✓ APIs for basic and advanced IPMI functions

## CD QNX/BSn

### QNX Board Support Package

This package includes:

- ✓ 32 and 64-bit support
- ✓ Select drivers
- ✓ Support for a wide range of processor boards
- ✓ An enhanced VME driver and API for our VME boards
- ✓ An Application Flash driver for storage capability
- ✓ An API to read temperature/voltage sensors when fitted
- ✓ Example GPIO, Timer, IPMI and DMA code

## SW BIT/xxx

### Built-In-Test (BIT)

Our Built-In Test (BIT) software provides a range of self-test diagnostics which allows for extensive live in-system testing. It is available for a range of Concurrent Technologies single board computers spanning various system architectures, VPX™, VME and CompactPCI.

- ✓ Comprehensive built-in-test package Includes Firmware and Software
- ✓ Includes standalone diagnostics
- ✓ Operating System specific
- ✓ diagnostics

## SW FN2/0xx

### Fabric Interconnect Network Software (FIN-S)

Concurrent Technologies Fabric Interconnect Networking Software (FIN-S) is a family of software packages that provides a rich fabric software ecosystem allowing applications on multiple processor boards to communicate with each other.

- ✓ Enables socket applications to run seamlessly
- ✓ Supports PCI Express® and RapidIO® fabrics
- ✓ Supports AMC and VPX boards

## SW NTM/nnn

### Intime API

The Custom library provides an Application Programming Interface (API) for inter-board communications using a PCI Express Non-Transparent (NT) bridge and DMA controllers.

- ✓ Read and write access to the NT Bridge registers
- ✓ Outbound access to off-board memory
- ✓ Configure on-board memory for inbound access
- ✓ Generate and receive Doorbell interrupts
- ✓ DMA read and write





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